Fact Sheet #6A - October 2002

US ARMY CORPS OF ENGINEERS
New England District

Long Island Sound
Dredged Material Disposal Site Designation EIS

Results of Field Program at Alternative Disposal Sites

Background

The U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (the Corps) are preparing an Environmental Impact Statement (EIS) that will consider the potential designation of one or more dredged material disposal site(s) in Long Island Sound (LIS), Connecticut and New York. This EIS will be specific to the western and central regions of LIS, although previous data collection included the entire Sound. The eastern regions of LIS will be evaluated at a later date. This proposed action is being conducted consistent with Section 102 (c) of the Marine Protection, Research, and Sanctuaries Act (MPRSA) and 40 CFR 230.80 of the regulations of the EPA under Section 404 of the Clean Water Act (CWA). The EIS will be prepared in accordance with the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500 et. seq.).

This Fact Sheet is one of a series designed to inform and update the public on the dredged material disposal and site designation process. In particular this Fact Sheet reports available results of the sampling effort that took place in July and August 2002 at the historic Bridgeport and Milford sites. For more information on this sampling effort, see Fact Sheet #6 Field Program for Alternative Disposal Sites.

Sampling Surveys

To obtain further information on these historic disposal sites, the Corps and EPA developed a sampling and analysis program consistent with previous studies conducted at the existing dredged material sites.

During the summer of 2002, sediment samples were collected from two historic dredged material disposal sites of Bridgeport and Milford. These samples were analyzed to understand the community structure of animals that live in the sediment (benthic infauna), to ascertain the distribution of certain contaminants, and to determine the toxicity of the sediment. In addition, the health and structure of the sediments at each site was assessed using a Sediment Profile Imager which uses a 35-mm camera to take pictures of sediment layers at each site.

Survey Results

Benthic Infauna Sampling

Sediment samples for benthic community analysis were successfully collected, and the associated animals sorted and identified to the lowest possible taxonomic category for each sampling location chosen at the Bridgeport and Milford sites. At this time these data are still being evaluated. Upon completion of the data interpretation, benthic community parameters such as species density by sample, dominant infaunal species, evenness of distribution, and community patterns will be assessed. These benthic community parameters will allow direct comparison to data from the existing dredged material disposal sites in Long Island Sound collected previously as part of this EIS. The interpretive data report will be posted on the EPA Web site (see back page).

Chemistry Sampling

Sediment samples for chemistry analysis were successfully collected, preserved, and analyzed for each sampling location chosen at the Bridgeport and Milford sites. The analytical data from these samples is still being assessed. Once completed the data will be posted on the EPA Web site (see back page).

Toxicity Sampling

Toxicity testing is performed to determine whether sediments from a specific location are detrimental to the health of organisms in the surrounding area. An acute toxicity test was conducted following guidance provided by the *Evaluation of Dredged Material Proposed for Ocean Disposal—Testing Manual* (EPA/USACE 1991) and *Guidance for Performing Tests on Dredged Material to be Disposed of in Open Waters* (EPA/USACE 1989), which provides regional guidance on determining whether sediments are acceptable for open ocean disposal. Sediment from each site, reference location, and control sample was placed in containers for 10-days, along with several test animals of the species *Ampelisca abdita*. Determination of the toxicity of the sediment was then evaluated based on the average mortality of organisms in each of the containers.

Average mortality was very low at all of the stations evaluated, with more than 80% of all *A. abdita* surviving at all stations sampled. In addition, survival associated with sediments for the historic Bridgeport and Milford sites was similar to that observed at reference stations. Based on these results, sediments from these sites are presumed to not be acutely toxic to benthic organisms. The interpretive report of these analyses will be posted on the EPA Web site (see address below).

Sediment Profiling Imaging (SPI)

SPI involves the use of a remote camera to evaluate the environmental status of the bottom habitat. Using the SPI camera it appears that both the historic Bridgeport and Milford sites are predominantly comprised of fine-sand-silt-clay. Sediments at both sites were also uniform and showed no signs of sediment layering. Stations sampled at both sites also appeared to support a diverse benthic community, typical of that expected for Long Island Sound. These indicate that the sediments have probably not been disturbed a great deal in the recent past and that the benthic communities located at both the sites are healthy.

Archaeological / Geomorphological Surveys

An archaeological/geomorphological survey of the proposed alternative disposal sites was conducted to identify possible underwater historic or archaeological resources. Survey data were acquired along a series of parallel tracklines spaced 50-meters apart and centered on both the Bridgeport and Milford sites. Data were collected simultaneously on the depth of the site, the contour of the bottom, and whether any metal objects were present. These data are still being assessed and will be included in a report that will be posted on the EPA Web site (address below).

Lobster Resource Surveys

Three meetings were held in Connecticut to ascertain the use by lobsters of these two historic sites, along with the present Western Long Island Sound (WLIS) and Central Long Island Sound (CLIS) dredged material disposal sites. Lobstermen and fishermen were interviewed regarding lobster, shellfish, and fish populations in the areas surrounding the sites. Several general conclusions were drawn from these conversations.

- Dredged material disposal within LIS does not appear to have a negative impact on lobstering.
- Disposal activities within LIS could be considered beneficial to the lobster community because catch information suggests the lobsters may favor the dredged material for its soft muddy content that sustains burrows and possible food sources.

A summary of the meetings has been posted on the EPA Web site (see address below).

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